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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ISTVAN GODOR, AKOS KOVACS, and ANDRAS RACZ

Appeal 2016-003881
Application 12/739,440
Technology Center 2400

Before ALLEN R. MacDONALD, JON M. JURGOVAN and PHILLIP A. BENNETT, *Administrative Patent Judges*.

MacDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 50–98. Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

Exemplary Claims

Exemplary claims 50 and 51 under appeal read as follows (emphasis added):

> 50. An Evolved Universal Terrestrial Radio Access Network (E-UTRAN) system transmitting Multimedia Broadcast Multicast Service (MBMS) data, the system comprising:
>
> a base station for transmitting the MBMS data as layered data comprising a lower layer in a first transmit stream and a number of higher enhancements layers in a second transmit stream different from the first transmit stream; and
>
> signaling circuitry for transmitting control information comprising signaling that binds together the different layers transmitted in the first and second transmit streams and belonging to the same MBMS service enabling a User Equipment (UE) to reconstruct the layered MBMS data.
>
> 51. The system according to claim 50, further comprising an entity for indicating to which layer data transmitted belongs.

Rejections

1. The Examiner rejected claims 50, 64, 78, and 92 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Malladi (US 2010/0322350 A1; Dec. 23, 2010) and Petrovic et al. (US 2007/0053336 A1; Mar. 8, 2007).[1]

2. The Examiner rejected claims 51–53, 65–67, 79–81, 93, and 94 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Malladi, Petrovic, and Lee et al. (US 2012/0127909 A1; May 24, 2012).[2]

3. The Examiner rejected claims 54, 68, 82, and 95 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Malladi, Petrovic, Lee, and Yi et al. (US 2010/0142429 A1; June 10, 2010).[3]

4. The Examiner rejected claims 55, 56, 69, 70, 83, 84, and 96 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Malladi, Petrovic, and Vartiainen et al. (US 2008/0170541 A1; July 17, 2008).[4]

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[1] Separate patentability is not argued for claims 64, 78, and 92. Except for our ultimate decision, these claims are not discussed further herein.
[2] Separate patentability is not argued for claims 65–67, 79–81, 93, and 94. As to separately argued claims 52 and 53, our decision as to claim 51 is determinative as to the rejection of claims 52 and 53. Except for our ultimate decision, claims 52, 53, 65–67, 79–81, 93, and 94 are not discussed further herein.
[3] Separate patentability is not argued for claims 68, 82, and 95. Except for our ultimate decision, these claims are not discussed further herein.
[4] Separate patentability is not argued for claims 55, 69, 70, 83, 84, and 96. Therefore, the rejection of claims 55, 69, 83, and 96 turns on our decision as to claim 50. Claims 70 and 84 stand with claim 56. Except for our ultimate decision, claims 55, 69, 70, 83, 84, and 96 are not discussed further herein.

5. The Examiner rejected claims 61, 62, 75, 76, 89, 90, and 98 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Malladi, Petrovic, Yi, and Huang et al. (US 2008/0261531 A1; Oct. 23, 2008).[5]

6. The Examiner rejected claims 57–60, 63, 71–74, 77, 85–88, 91, and 97 under 35 U.S.C. § 103(a) as being unpatentable over Malladi and Petrovic in various combinations with other references.[6]

Appellants' Contentions

1. Appellants contend that the Examiner erred in rejecting claim 50 under 35 U.S.C. § 103(a) because:

> Malladi does mention the terms "base layer" and "enhancement layer" when discussing a signal However, it is important to note the context in which Malladi uses these terms — and they are not used in the same context as the "lower layer" and "a number of higher enhancement layers" recited in claim 50. In fact, as evidenced by the following passage, Malladi assigns completely different meanings to the terms "base layer" and "enhancement layer."

App. Br. 5.

> Malladi defines the so-called "robustness" of a signal as a function of its decoding characteristics (i.e., may be decoded at lower SNR and lower CII ratios of the signal), and then uses the terms "base layer" and "enhancement layer" to distinguish between signals that are "more robust" and "less robust,"

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[5] Separate patentability is not argued for claims 61, 75, 76, 89, 90, and 98. Therefore, the rejection of claims 61, 75, 89, and 98 turns on our decision as to claim 50. Claims 76 and 90 stand with claim 62. Except for our ultimate decision, claims 61, 75, 76, 89, 90, and 98 are not discussed further herein.

[6] Separate patentability is not argued for claims 57–60, 63, 71–74, 77, 85–88, 91, and 97. Thus, the rejections of these claims turns on our decision as to the claim 50. Except for our ultimate decision, these claims are not discussed further herein.

> respectively. Compare this with the terms "lower layer" and "enhancement layers" recited in claim 50. Specifically, the claimed "lower layer" carries the minimum information required by a decoder to provide a minimum quality for the receivers, while each of the enhancement layers carry information that provides quality refinement for the stream in each lower layer. *Spec.*, p. 1, II. 20–23. Indeed, whatever context Malladi discloses has nothing to do with the claim terms.

App. Br. 5–6.

2. Appellants contend that the Examiner erred in rejecting claim 50 under 35 U.S.C. § 103(a) because:

> There is no mention whatsoever in Malladi of the base station transmitting a first transmit stream in a base layer that carries the minimum information required by a decoder to provide a minimum quality for a receiver, and transmitting a second transmit stream in an enhancement layer that carries information providing quality refinement for the stream in the base layer.

App. Br. 7.

3. Appellants contend that the Examiner erred in rejecting claim 50 under 35 U.S.C. § 103(a) because:

> Regardless of what Petrovich may or may not teach with respect to "a number of enhancement layers," Petrovich does not teach or suggest "a base station for transmitting the MBMS data as layered data comprising a lower layer *in a first transmit stream* and a number of higher enhancements layers *in a second transmit stream different from the first transmit stream*," as recited in claim 50.

App. Br. 8.

4. Appellants contend that the Examiner erred in rejecting claim 50 under 35 U.S.C. § 103(a) because:

> [S]ince both references alone fail to teach or suggest the same claim limitation, the combination of these two references necessarily fails to teach or suggest this claim limitation. Indeed,

> there is no reason for one of ordinary skill in the art to combine two references if such a combination would not produce the claimed method.

App. Br. 8.

5. Appellants contend that the Examiner erred in rejecting claim 50 under 35 U.S.C. § 103(a) because:

> [T]he Office Action ***is also incorrect in asserting that Malladi discloses the "control information"*** recited in claim 50. As stated above, Malladi simply uses the terms base and enhancement layers to distinguish between signals as a function of its decoding characteristics (i.e., the "base" or "more robust" signals may be decoded at lower SNR and lower CII ratios of the signal). There is no mention whatsoever in Malladi of control information that binds the disclosed layers together because such is not required in Malladi. That is, ***there is no need for Malladi to bind together the two signals, as claimed***, because neither signal complements the other in terms of enhancing the quality of information in the other signal.
>
> In prosecution, the Examiner specifically identified Figure 6 and its corresponding paragraphs [0141–0147 and 0152] as disclosing this claimed aspect. Appellant respectfully disagrees, however, as the rejection misinterprets this passage. This section of Malladi discusses single frequency networks and hierarchical modulation. It says nothing whatsoever about signaling circuitry that ***transmits*** control information.

App. Br. 9, emphases added.

6. Appellants contend that the Examiner erred in rejecting claim 50 under 35 U.S.C. § 103(a) because:

> Petrovich fails to remedy Malladi because it too fails to teach or suggest "signaling circuitry for transmitting control information comprising signaling that binds together the different layers transmitted in the first and second transmit streams and belonging to the same MBMS service enabling a User Equipment (UE) to reconstruct the layered MBMS data."

App. Br. 9–10, emphasis omitted.

7. Appellants contend that the Examiner erred in rejecting claim 51 under 35 U.S.C. § 103(a) because:

> As noted in the Office Action, Lee teaches, in paragraphs [0045 and 0046], an MBMS notification message that may be transmitted to a UE through an L1/L2 control information region, and through a data region. The Examiner asserts that by sending this notification message through the L1/L2 layer, Lee teaches an entity indicating to which layer data transmitted belongs, as claimed.
>
> However, scrutiny of the cited passages, as well as the rest of Lee, reveals that the disclosed notification messages contain *no indication whatsoever* as to which layer transmitted data belongs.

App. Br. 12.

8. Appellants contend that the Examiner erred in rejecting claim 54 under 35 U.S.C. § 103(a) because "Yi does not teach or suggest that the RNTI indicates 'to which layer transmitted data belongs.'" App. Br. 15.

9. Appellants contend that the Examiner erred in rejecting claim 56 under 35 U.S.C. § 103(a) because:

> In the Office Action, the Examiner equates the disclosed "transmission pattern" of Vartiainen to the claimed "transport format." However, the two are not the same. The specification clearly defines what is meant by the "transport format" of claim 56 ("it is possible to take into account the radio channel conditions of the receiving UEs when deciding which components of the media stream to transmit and what transmission parameters to use such as transmission power, coding, etc."). *Spec.*, p. 5, II. 9–12. Vartiainen, in contrast, discloses that the disclosed "transmission pattern" relates to the frequency of scheduling. [Vartiainen, ¶ [0065]].

App. Br. 17.

10. Appellants contend that the Examiner erred in rejecting claim 62 under 35 U.S.C. § 103(a) because:

> [N]one of [the Examiner identified] so-called "advantages" [of Yi] teach or suggest a system "configured to transmit higher layer media components in single cell Point to Multipoint (PTM) mode based on any one or more of the traffic load in a given base station, UE feedback information, or the interference caused to neighbor cells," as recited in claim 62. In fact, the entirety of Yi appears conspicuously silent regarding any of these aspects.

App. Br. 19.

Issues on Appeal

Did the Examiner err in rejecting claims 1, 7, 9, 11, and 16 as being obvious?

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments (Appeal Brief) that the Examiner has erred.

As to Appellants' above contentions 7, 8, and 10, respectively covering claims 51, 54, and 62, we agree. We are unable to find support in Lee and Yi for the Examiner's findings. We conclude, consistent with Appellants' argument, there is insufficient articulated reasoning to support the Examiner's findings. Therefore, we conclude that there is insufficient articulated reasoning to support the Examiner's final conclusions that claims 51, 54, and 62 would have been obvious to one of ordinary skill in the art at the time of Appellants' invention.

As to Appellants' above contention 1, covering claim 50, we disagree. First, the Examiner correctly points out (Ans. 37) that "the claim language

does not recite the context of the terms lower layer and higher enhancement layers." Therefore, the argument is not commensurate with the scope of the claim. Second, Appellants are mistaken in arguing "Malladi assigns completely different meanings to the terms 'base layer' and 'enhancement layer.'" App. Br. 5. Appellants point out that Malladi's "base layer" and "enhancement layer" are directed to "robustness" of a signal as a function of its decoding characteristics including signal to noise ratio (SNR). *Id.* Appellants then point out that their Specification relates "base layer" and "enhancement layer" are directed to "quality." Appellants overlook that SNR is a measure of signal quality and therefore Malladi does not assign ***completely different*** meanings to the terms.

As to Appellants' above contention 2, Appellants repeat the "quality" argument, and we reach the same result for the reasons above as to contention 1.

As to Appellants' above contentions 3 and 6, Appellants are attacking Petrovic singly for lacking a teaching ("a base station . . ." and "signaling circuitry . . .") that the Examiner relied on a combination of references to show. Particularly, the Examiner points to Malladi for these limitations. Final Act. 3. It is well established that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091 (Fed. Cir. 1986). Appellants argue findings the Examiner never made. This form of argument is unavailing to show Examiner error.

As to Appellants' above contention 4, Appellants rely on contentions 1–3 as the sole foundation for asserting "there is no reason for one of

ordinary skill in the art to combine two references." As we disagree with Appellants' contentions 1–3, we similarly disagree with Appellants' contention 4.

As to Appellants' above contention 5, we disagree. First, Appellants are mistaken in asserting "[t]here is no mention whatsoever in Malladi of control information that binds the disclosed layers together because such is not required in Malladi." App. Br. 9. Appellants' Specification at page 4, lines 13–15, states "the control information may contain, the session start and signaling ***that binds together*** the transmission of the different layers belonging to the same MBMS service . . ." Emphasis added. Malladi explicitly states that "[t]he receiver may attempt to decode the second data stream from both the first enhancement layer and the second base layer." ¶ 154. Further, Malladi states that such decoding is controlled by instructions stored at the user equipment. ¶ 69. We deem Appellants' claimed binding to require no more than what is taught by Malladi.

Second, to the extent that Appellants are arguing that the prior art fails to teach transmitting the control information to the user equipment, we point out that Appellants' Background indicates that transmission of control information is known in the art. Spec. 3 ("The MCCH channel carries control information necessary for the reception of the MTCH channel. The MCCH includes session/service identities for sessions to be started, i.e., announcing service starts, identities for ongoing services, scheduling information etc.").

As to Appellants' above contention 9, we disagree. The Examiner's rejection cites to Vartiainen at paragraphs 73–74 as teaching "whether to modify the transport format (transmission pattern)." Final Act. 20.

Appellants contention points to Vartiainen at paragraph 65 to show that adjusting the transmission pattern is not adjusting the "transport format" as claimed because Appellants' Specification limits the format to transmission parameters such as ***transmission power***, coding, etc. Appellants overlook that Vartiainen at paragraphs 73–74 (cited by the Examiner) is directed specifically to modifying the "transmit power." Vartiainen at paragraphs 73–74 speaks for itself as teaching the claimed modifying the transport format (e.g., "transmission power") as construed by Appellants in their argument. The Examiner's typographical error in the rejection of substituting the phrase "transmission pattern" for the phrase "transmission power" does not negate the explicit teaching of Vartiainen at paragraphs 73–74.

CONCLUSIONS

(1) The Examiner has not erred in rejecting claims 50, 55–61, 63, 64, 69–75, 77, 78, 83–89, 91, 92, 96–98 as being unpatentable under 35 U.S.C. § 103(a).

(2) Appellants have established that the Examiner erred in rejecting claims 51–54, 62; 65–68, 76; 79–82, 90; 93–95 as being unpatentable under 35 U.S.C. § 103(a).

(3) Claims 51–54, 62; 65–68, 76; 79–82, 90; 93–95 have not been shown to be unpatentable.

(4) Claims 50, 55–61, 63, 64, 69–75, 77, 78, 83–89, 91, 92, 96–98 are not patentable.

DECISION

The Examiner's rejections of claims 50, 55–61, 63, 64, 69–75, 77, 78, 83–89, 91, 92, 96–98 as being unpatentable under 35 U.S.C. § 103(a) are affirmed.

The Examiner's rejections of claims 51–54, 62, 65–68, 76, 79–82, 90, and 93–95 as being unpatentable under 35 U.S.C. § 103(a) are reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART